

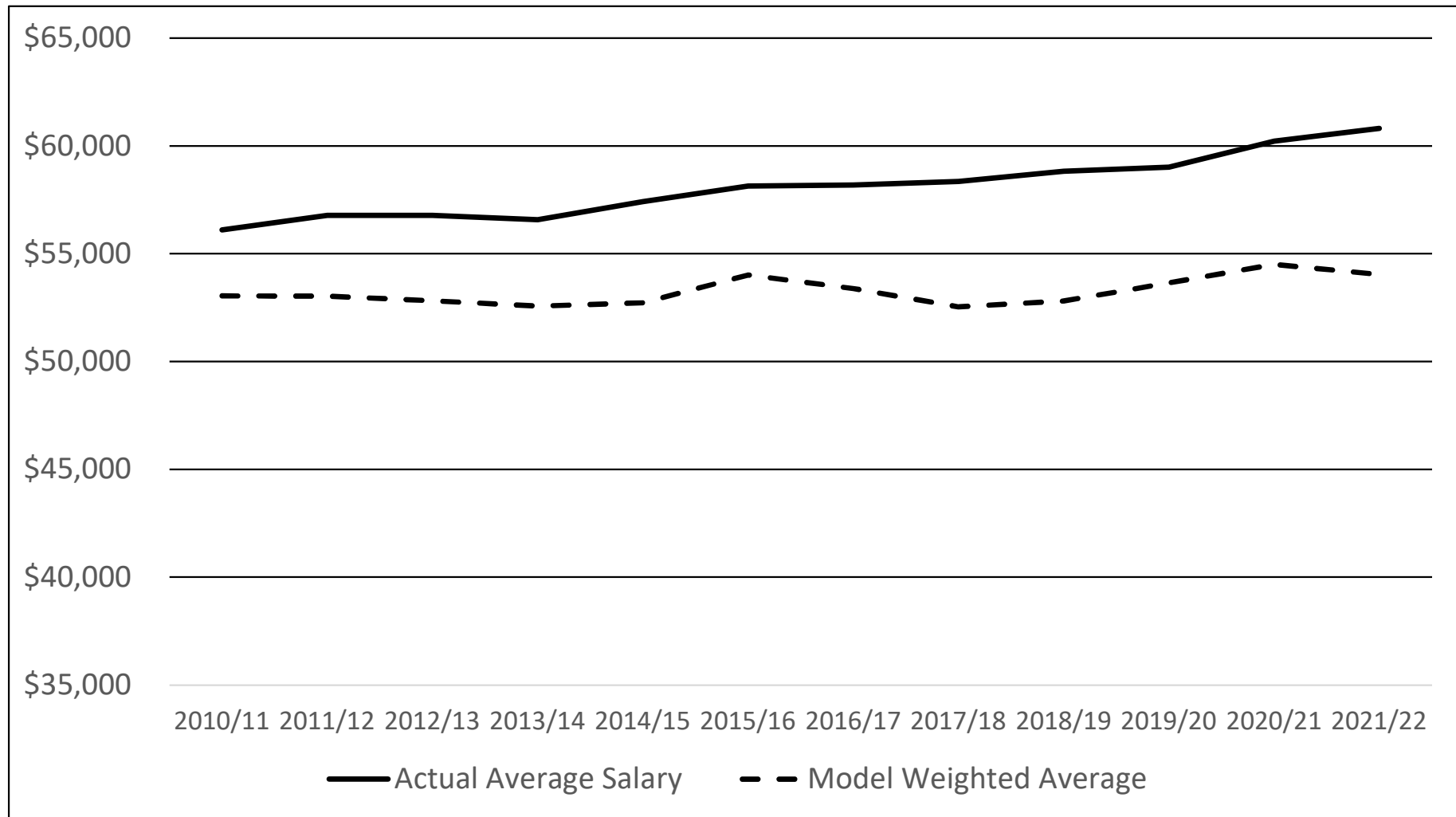
Labor Market Analysis of Teaching Staff in Wyoming

Report to the
Joint Appropriations Committee and the
Joint Education Committee

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Context: Actual Average Teaching Salaries and Average Teaching Salaries in the Wyoming Funding Model



Source: Wyoming Department of Education staffing files. Model salaries from Wyoming Legislative Service Office.

Cost Pressures Matter Because They Affect Quality of Teachers

- Cost pressures are forces that require higher salaries to maintain quality of teaching pool.
- How is quality of teaching pool determined?
- Individuals decide to teach based on skills/ interests and other employment options.
- High teaching salaries can attract individuals with better alternative employment options.

Monitoring Process

- There is no “right” level of the indicators (teacher salary, retention rates, retirement rates)
- However, changes relative to historical patterns signal cost pressures on districts
- This report combines data from many sources (National Education Association, US Department of Education’s National Center for Education Statistics, WY Department of Education, US BLS Occupational Employment Statistics, University of Wyoming)

Overview of Cost Pressure Indicators

- Labor Market Indicators

- Demographic Indicators

- Retention Indicators

- Recruitment Indicators

Labor Market Indicators

1. Changes in the ratio of teaching wages relative to wages of comparable professionals

High salaries relative to other professions:

- Attract more/higher ability college students into teaching field
- Keep new grads with teaching degrees in teaching
- Retain current teachers in teaching

Labor Market Indicators

2. Comparison with other locations

High teaching salaries relative to other locations:

- Attract new graduates/current teachers from other areas into WY
- Retain new graduates/current teachers from WY

Demographic Indicators

3. Trends in student enrollment

4. Trends in teacher retirement

Student enrollment and retirement trends impact number of open positions districts will need to fill

Recruitment and Retention Indicators

- 5. The fraction of new hires
- 6. Retention rates of current teachers

These reflect current hiring conditions for school districts based on actual salaries

- 7. Enrollment in teacher training programs

Pipeline of future teachers

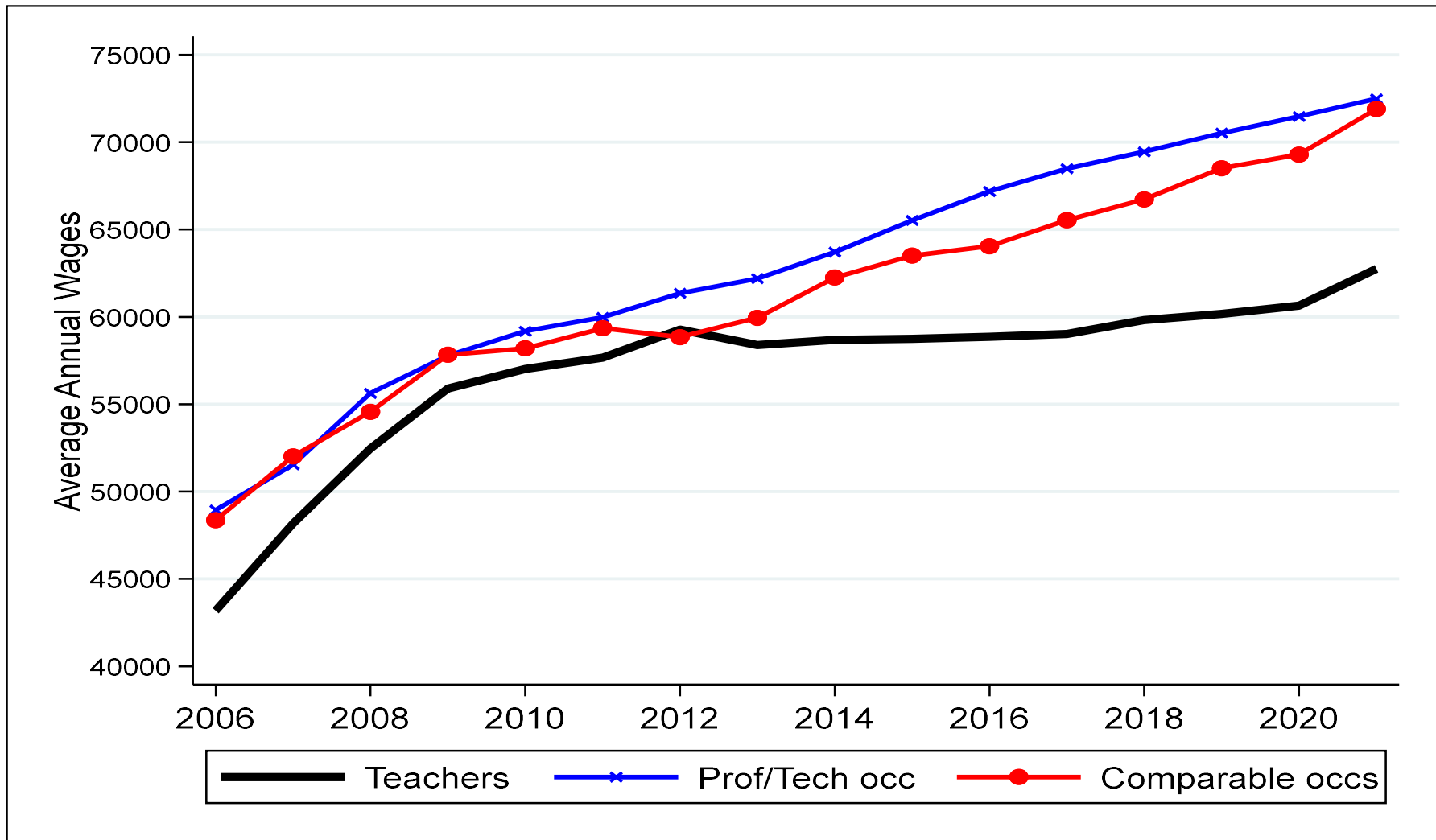
Sources of Cost Pressure: Labor Market and Demographic Indicators

Indicator 1:

Changes in the ratio of teaching wages and wages in other professional and technical occupations

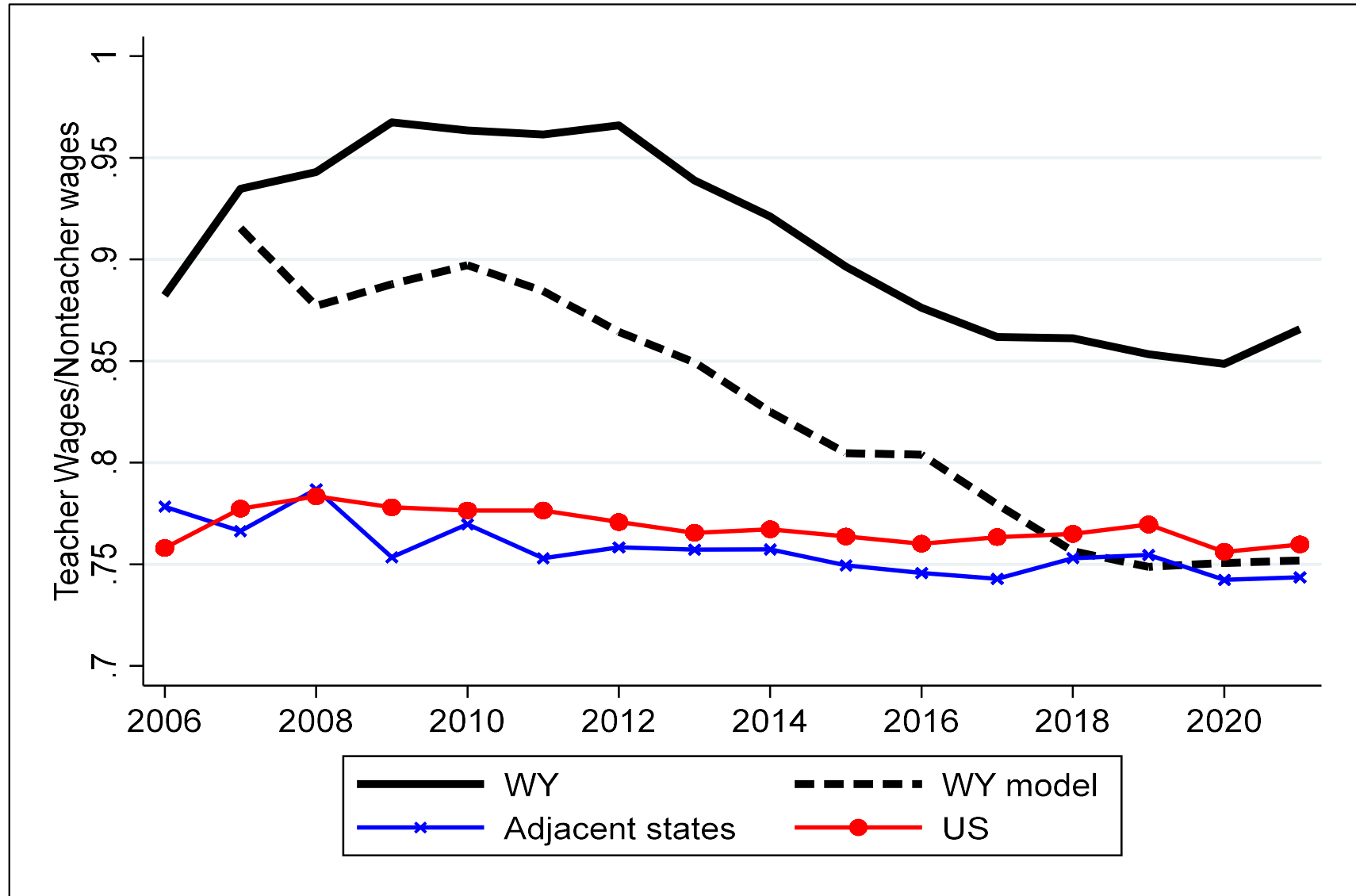
- OES quarterly establishment data
- Comparisons: All professional and technical occupations; Comparable occupations with similar job characteristics and skill requirements
- These data can not be adjusted for age, hours/weeks of work, or benefits, but are most current

Teaching wages have declined significantly relative to comparable workers



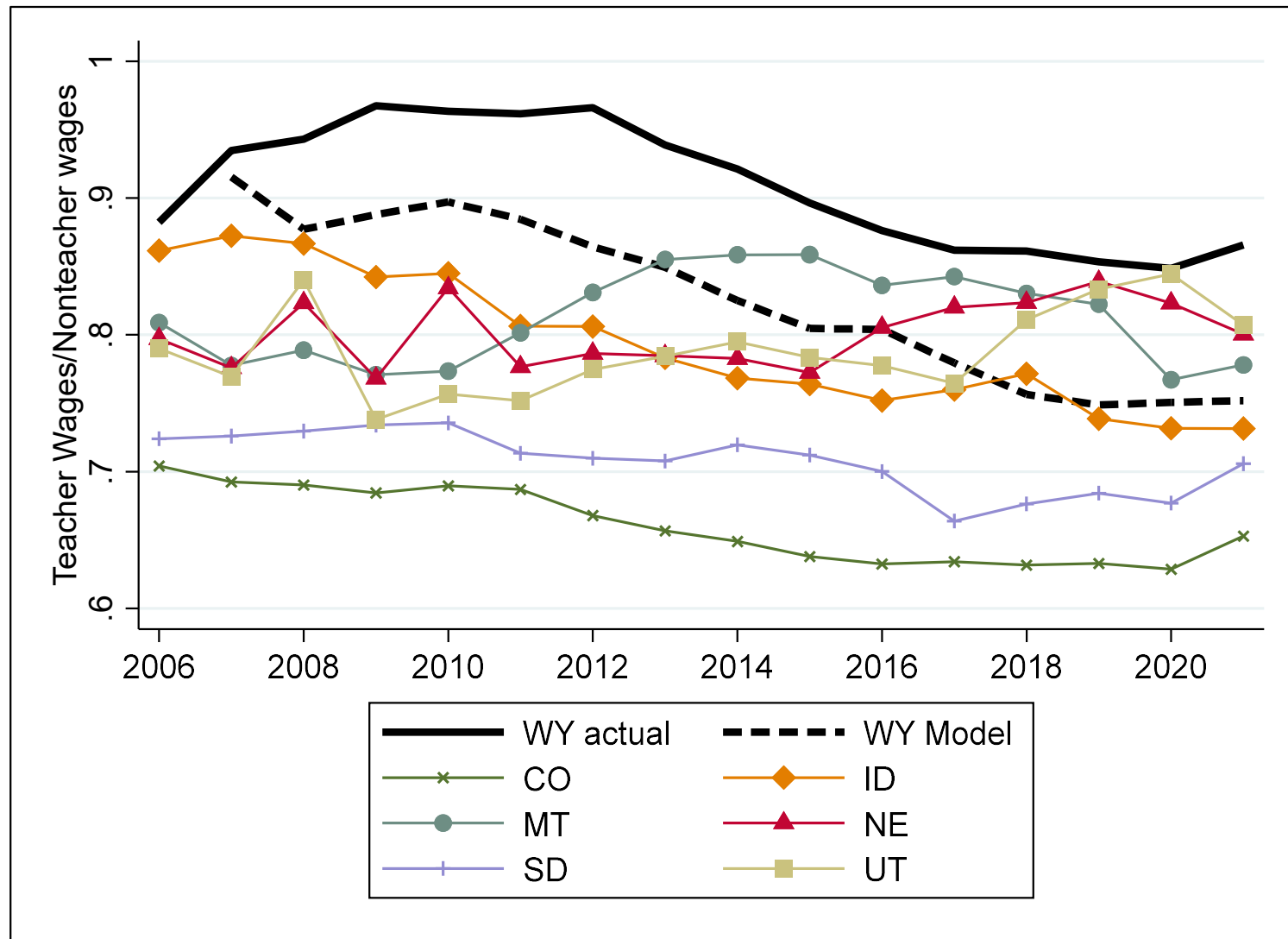
Source: U.S. Bureau of Labor Statistics May Quarterly Occupational Employment Statistics. All ownerships across all NAICS.

Ratio remains high in Wyoming has fallen relative to average of other states



Source: U.S. Bureau of Labor Statistics May Quarterly Occupational Employment Statistics. All ownerships across all NAICS.

Model ratio is middle of surrounding states



Source: U.S. Bureau of Labor Statistics May Quarterly Occupational Employment Statistics. All ownerships across all NAICS.

Non-teacher labor market in 2022

Percent Change in Average Weekly Wage		
	March 2020 – March 2021	March 2021 - March 2022
U.S.	5.9%	6.7%
Wyoming	-1.6%	11.2%
Colorado	4.2%	8.8%
Idaho	5.2%	8.5%
Montana	5.4%	8.3%
Nebraska	3.5%	9.2%
North Dakota	-1.9%	6.9%
Utah	3.7%	8.2%

By education (National level) Median usual weekly earnings of full-time wage and salary workers ages 25+	
BA or higher	6.9%
Some college	2.9%
HS only	4.4%
Less than HS	9.3%
BA or higher	6.9%

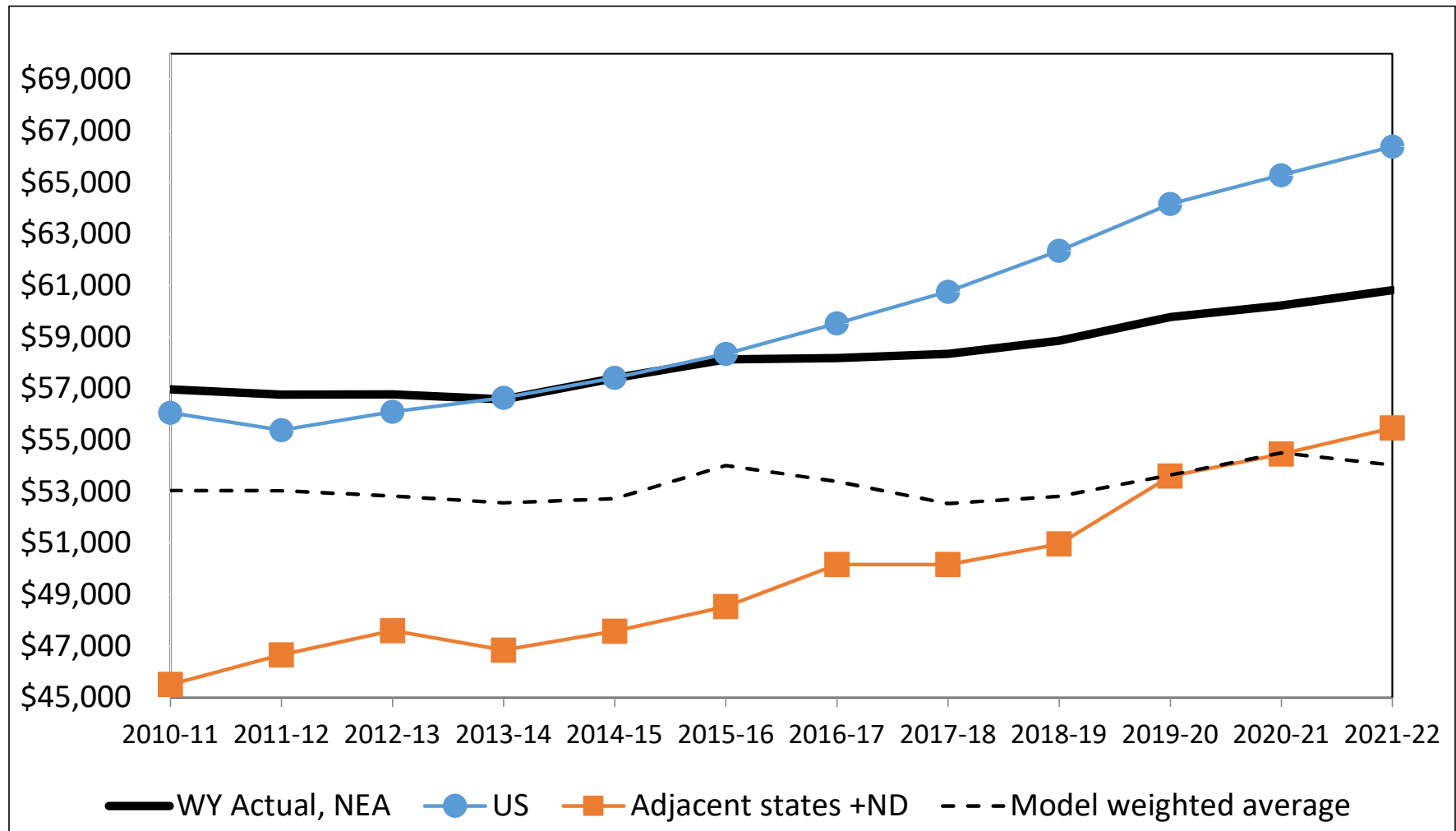
Source: Average weekly wages from Bureau of Labor Statistics
Quarterly Census of Employment and Wages. Median usual weekly
wages of full-time workers from BLS Current Population

Indicator 2:

Changes in ratio of teaching wages in WY to teaching wages in other states

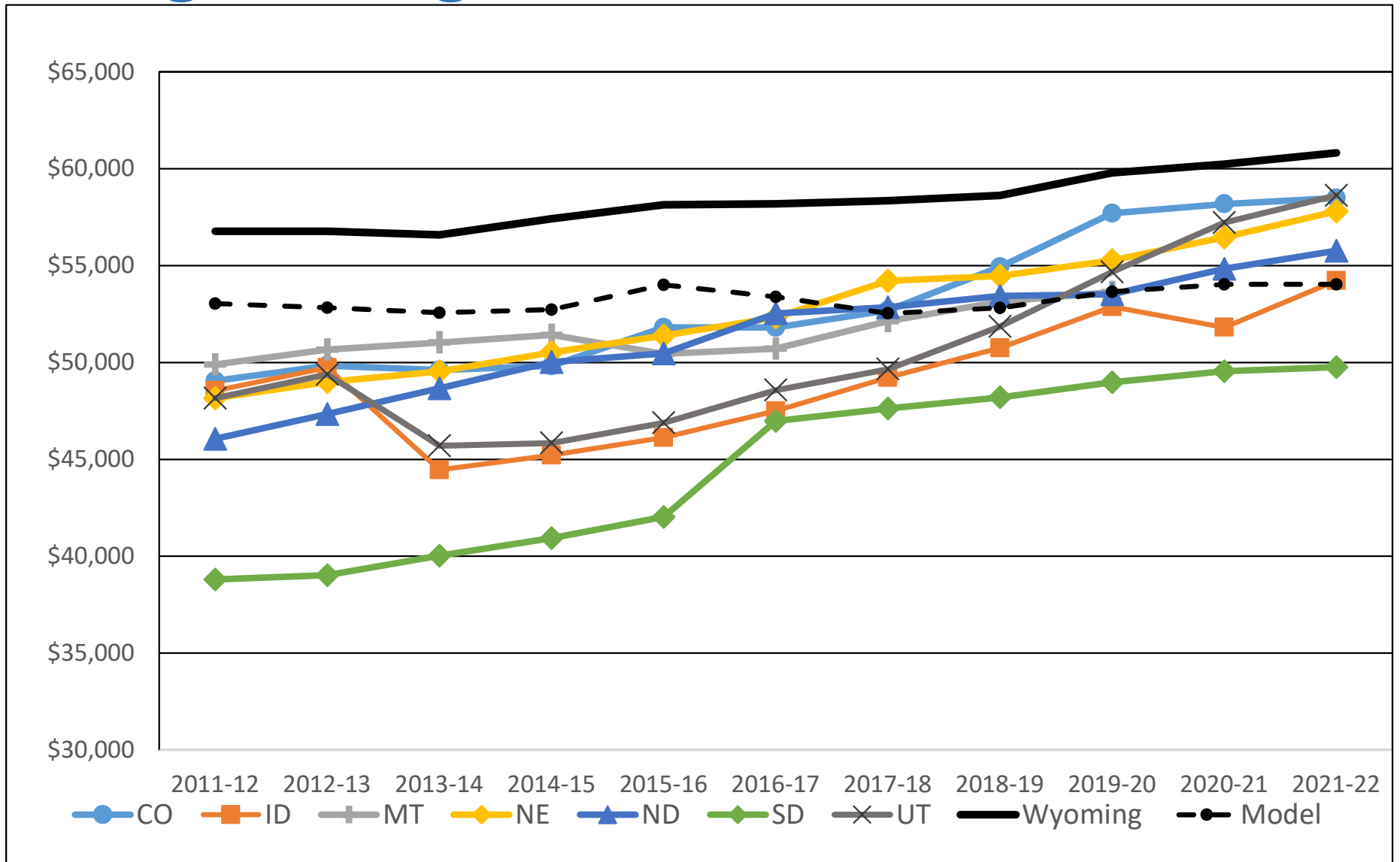
- Data from National Education Association survey of state education agencies
- Trend reflects changing attractiveness of teaching in WY relative to other states

WY Average below US average
Gap relative to adjacent states + ND is narrowing
Model for 2021-22 lies below average in those states



Source: National Education Association, Ranking and Estimates of School Statistics.
The 2021/22 salary figures are estimates; all other years are actual.

Average Teaching Salaries in Neighboring States + ND



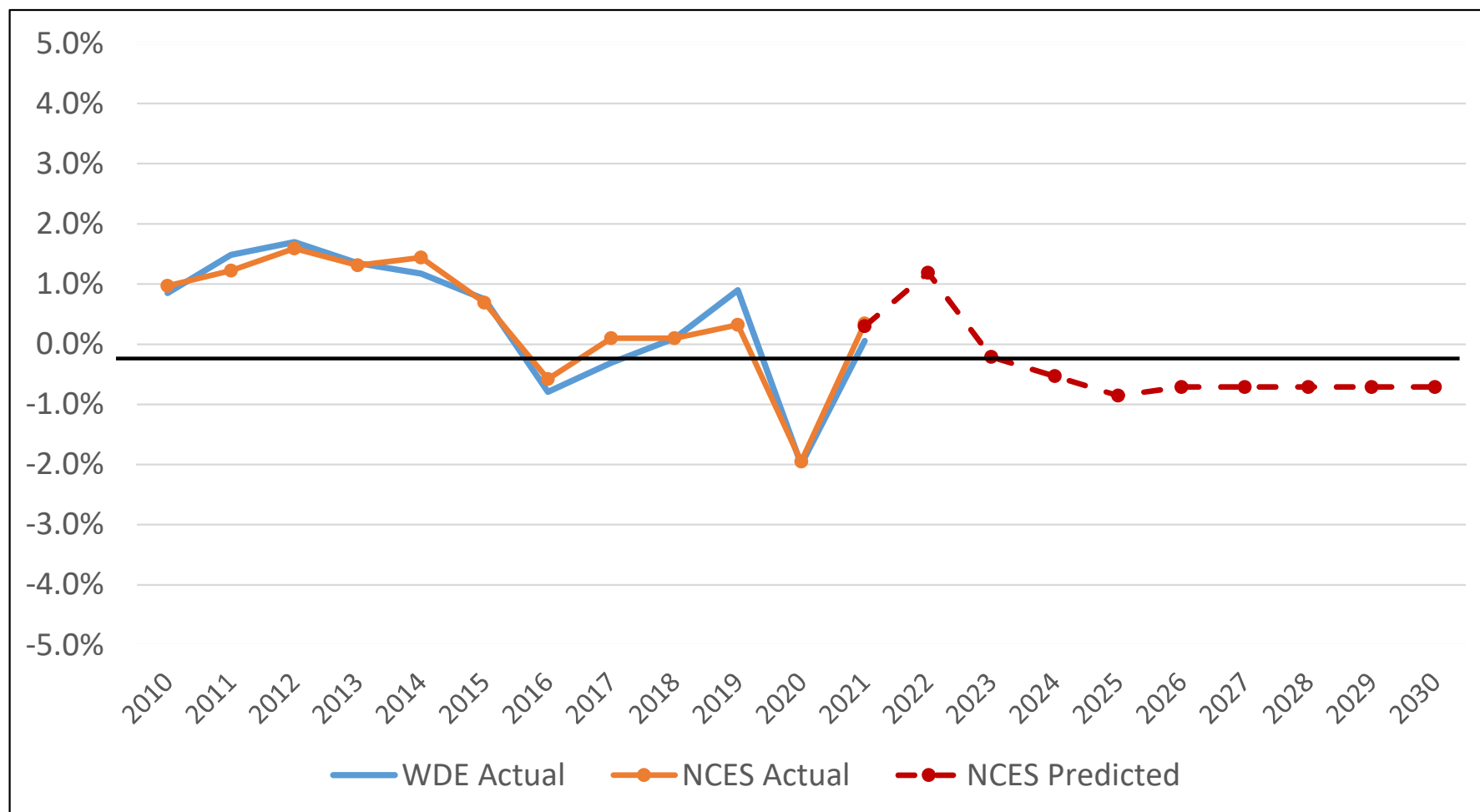
Source: National Education Association, Ranking and Estimates of School Statistics.
The 2021/22 salary figures are estimates; all other years are actual.

Indicator 3:

Trend in Student Enrollment

- Data from WY Department of Education student enrollment numbers, projections from NCES
- WY experienced sharp decline in enrollment, future projections are low growth
- If rising student enrollment can lead to more new positions to fill, declining leads to less pressure

Student enrollment predicted to continue to decline



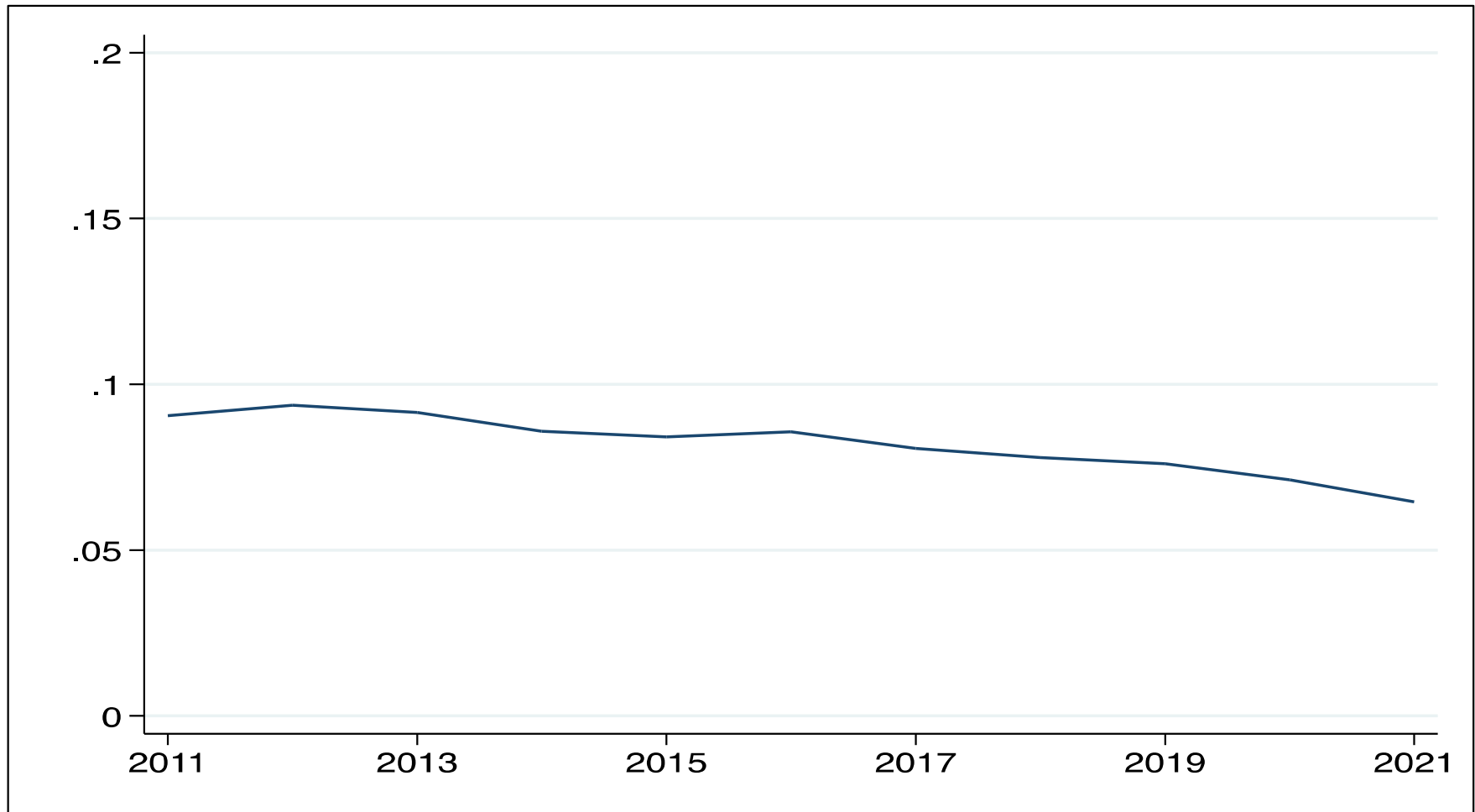
Source: National Center for Education Statistics, Projections of Education Statistics to 2030, Wyoming Department of Education. Actual Enrollment for Fall 2020-2022 Projected Enrollment 2022-2030.

Indicator 4:

Trend in teacher retirements

- Last 10 years have been a steady decline in number of older teachers
- Percentage likely to retire predicted to be relatively constant

Declining number teachers 60+



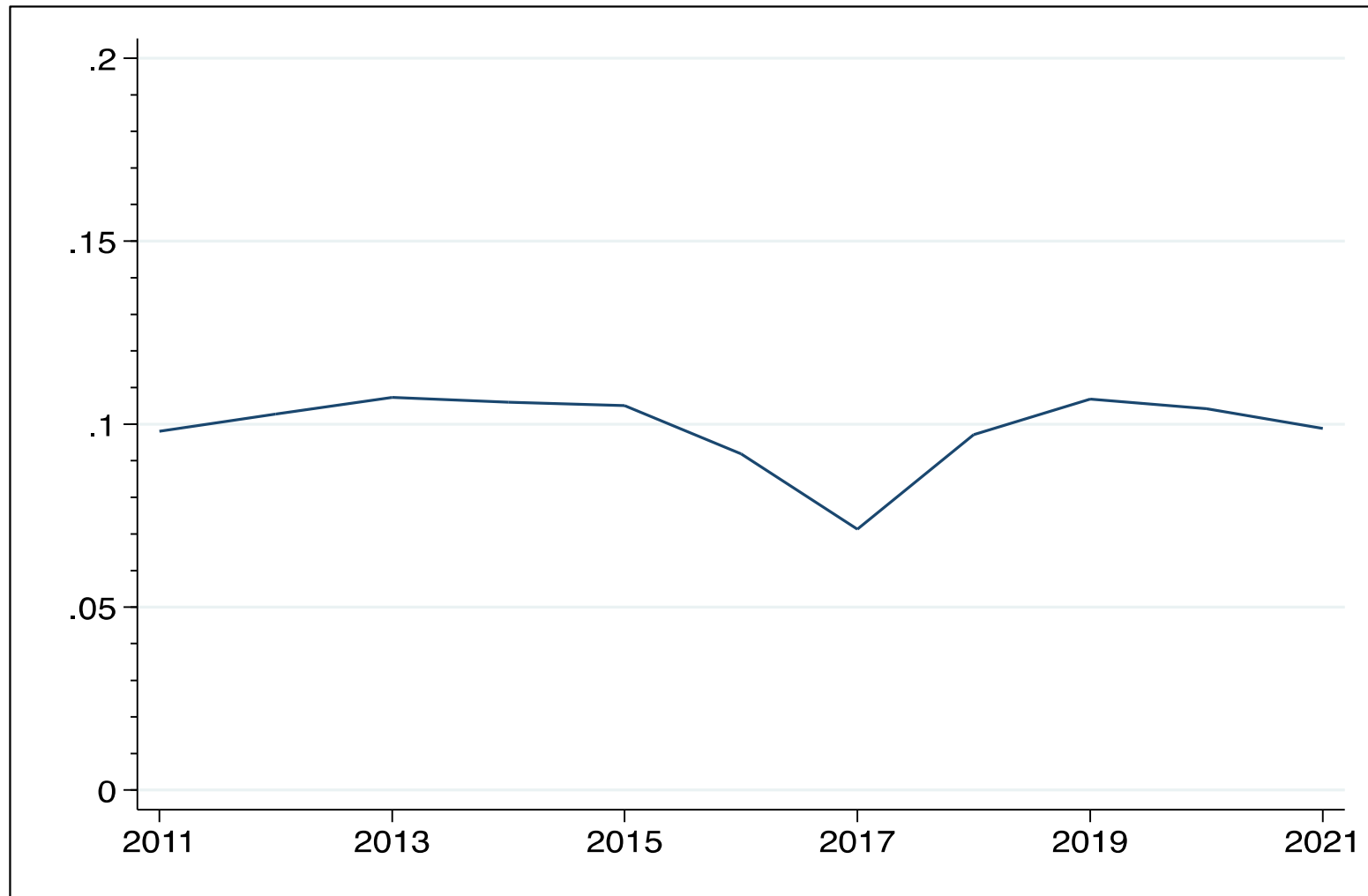
Source: Wyoming Department of Education Staffing Files (WDE 602)

Indicator 5:

Percent New Hires

- Percent new hires is a combination of new positions, teacher retirement, exit for other reasons
- Percent of new hires has remained relatively constant, slight decline recently
- This is due to few exits from retirement, declining student enrollment

Percent of new hires is stable

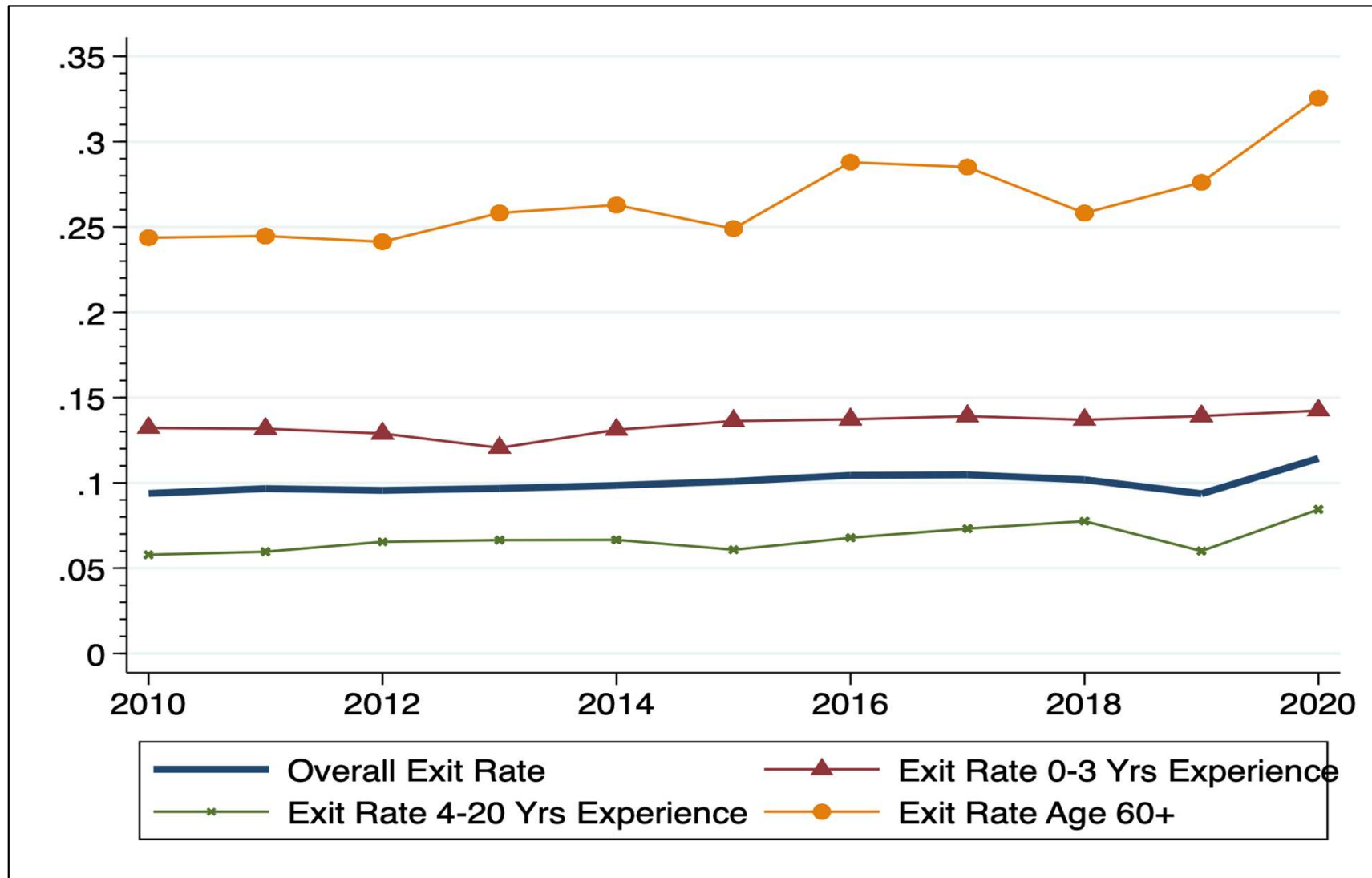


Source: Wyoming Department of Education Staffing files (WDE 602)

Indicator 6: Teacher Retention Rates

- Quantity based measure available:
 - Overall retention rate
 - % new teachers (0-3 years experience) exiting
- Little information about whether high quality teachers are more or less likely to exit

Uptick in exit rates for older teachers



Source: Wyoming Department of Education Staffing files (WDE 602)

Vacancy Rates

- Wyoming is one of 13 states that do not collect vacancy data
- As a result cannot tell
 - (1) if there is a teaching shortage,
 - (2) if there are more issues in certain areas, and
 - (3) If there are more issues in certain teaching fields (e.g., special education)

(See Overview of State Policies to Improve Teacher Recruitment and Retention, Stoddard 2022)

Indicator 7: Recruitment and Pipeline

- What programs are hires coming from?
- What does the pipeline for future teachers look like?

Trends in Teacher Education

Teachers with BA degree earned 2016-2021, Hired 2017-2021

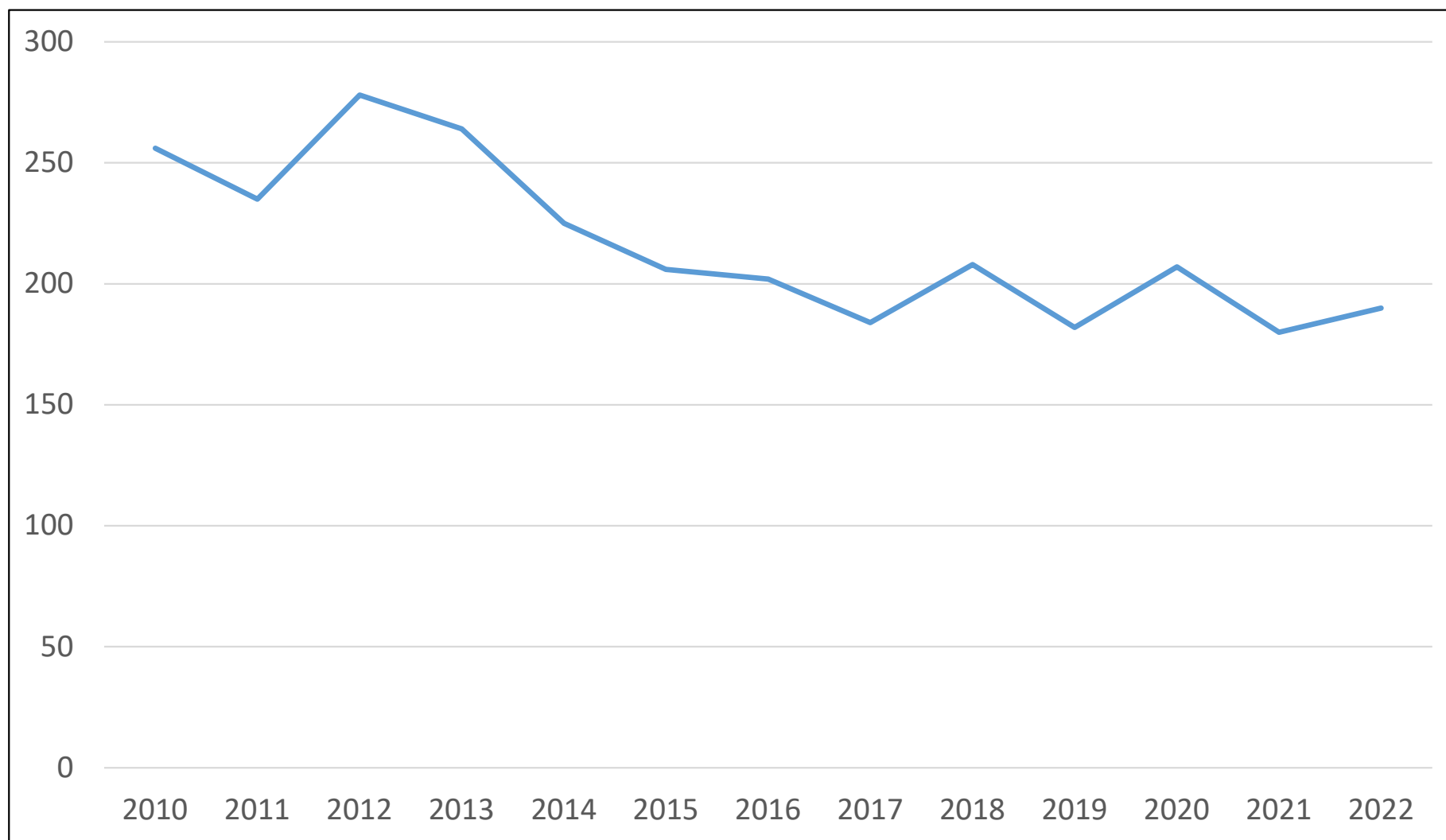
Bachelor's Degree Institution	Percent of 2016-2020 Hires With recorded institution
University of Wyoming	46%
Black Hills State University	6
Western Governor's University	11
Valley City State University	5
Chadron State	4
Grand Canyon University	3
About 2-2% each from Brigham Young University Idaho, University of Northern Colorado, Utah State University	
Other Universities: 26%	

University of Wyoming Teaching Graduates (BA)

Year	Education BA Degrees Awarded	All UW BA Degrees	Ed as Percent of Degrees	Avg ACT for Education Graduates	Avg ACT for All Graduates
2014	225	2,007	11.2%	22.3	23.8
2015	206	2,022	10.2%	23.2	24.0
2016	202	2,159	9.4%	22.7	24.2
2017	184	2,204	8.3%	23.0	24.4
2018	208	2,127	9.8%	22.7	24.4
2019	182	2,228	8.2%	23	24.5
2020	207	2,295	9.0%	23	24.6
2021	180	2,205	8.2%	23.6	24.6
2022	190	2,118	9.0%	22.8	24.4

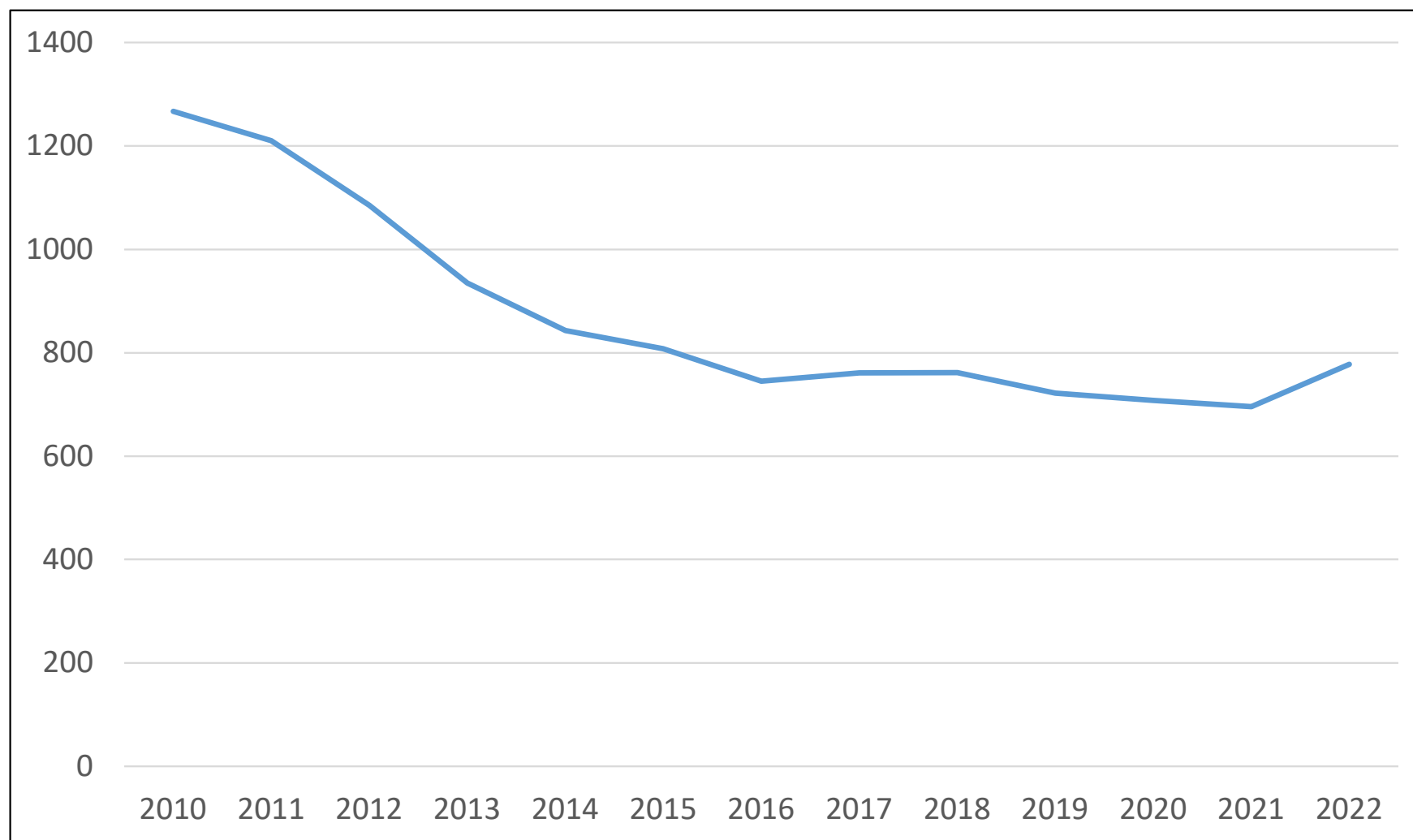
Source: University of Wyoming Banner Information System. Degrees in education include a CIP code of 13.

Number of BA teaching degrees from University of Wyoming stable since 2016



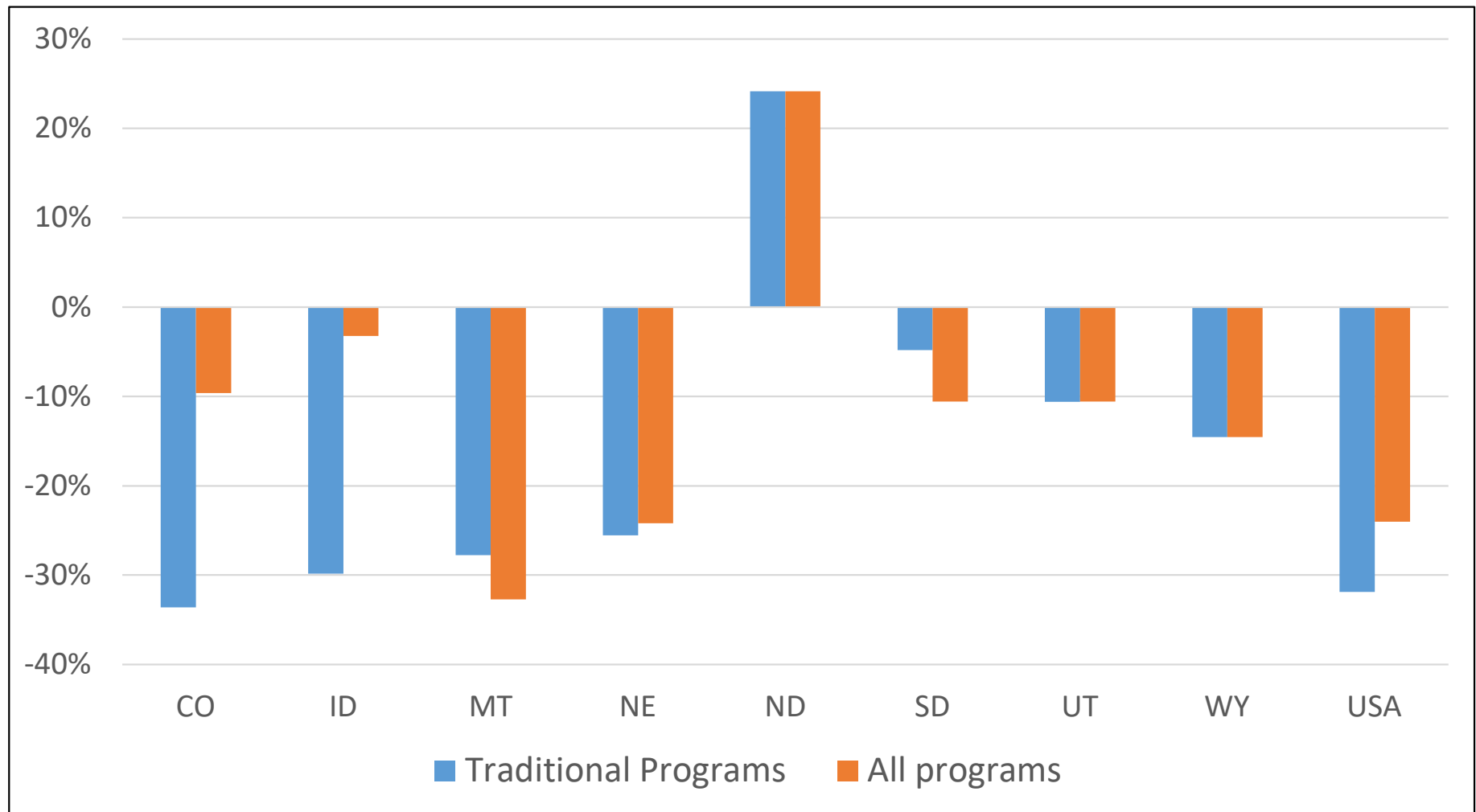
Source: University of Wyoming Banner Information System. Degrees in education include a CIP code of 13.

Number of teaching majors from University of Wyoming has recent uptick



Source: University of Wyoming Banner Information System. Degrees in education include a CIP code of 13.

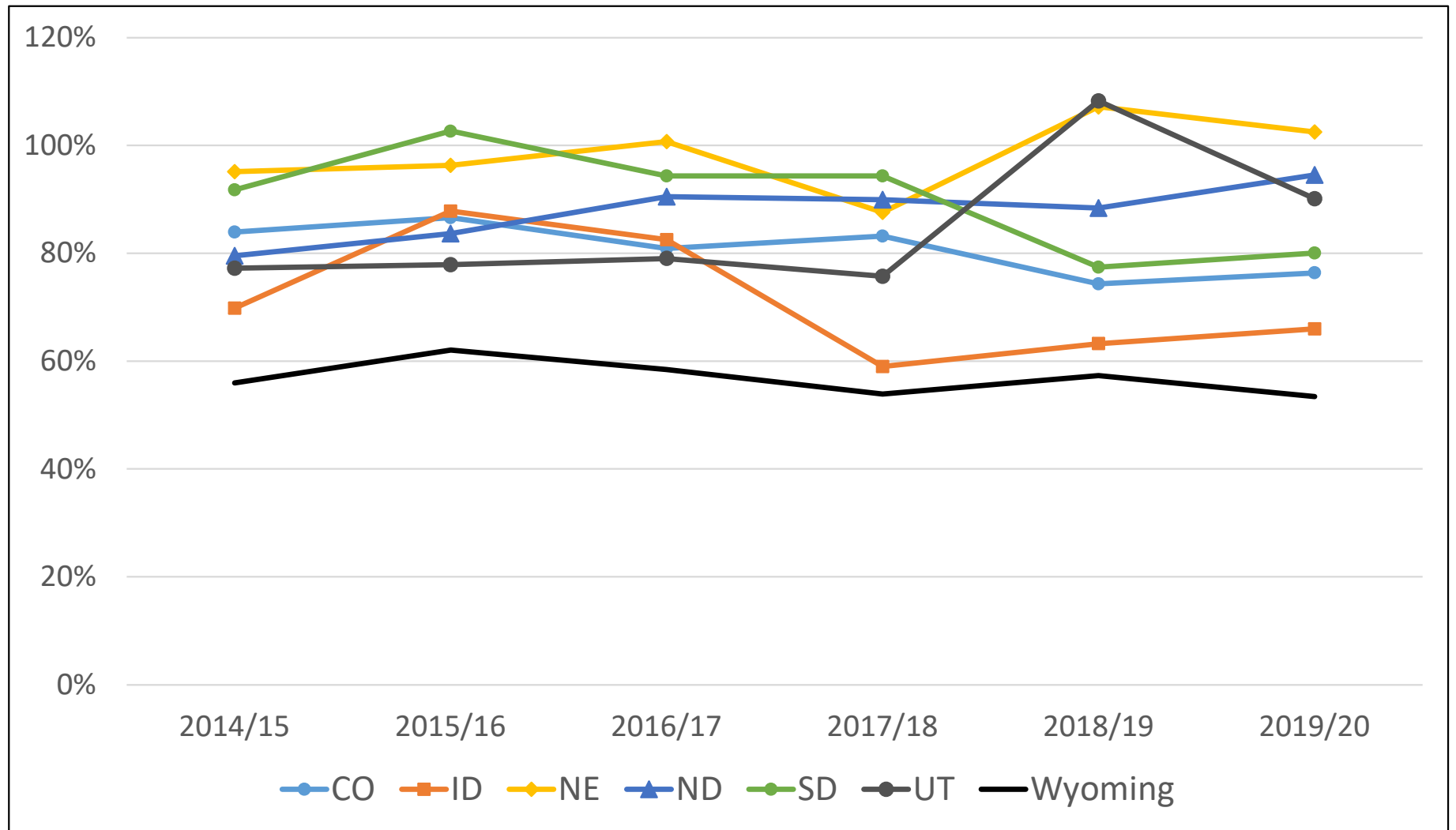
Teacher preparation in region



Source: US Department of Education. <https://title2.ed.gov/Public/Home.aspx>.
Accessed 9/16/2022

Do candidates get licensed?

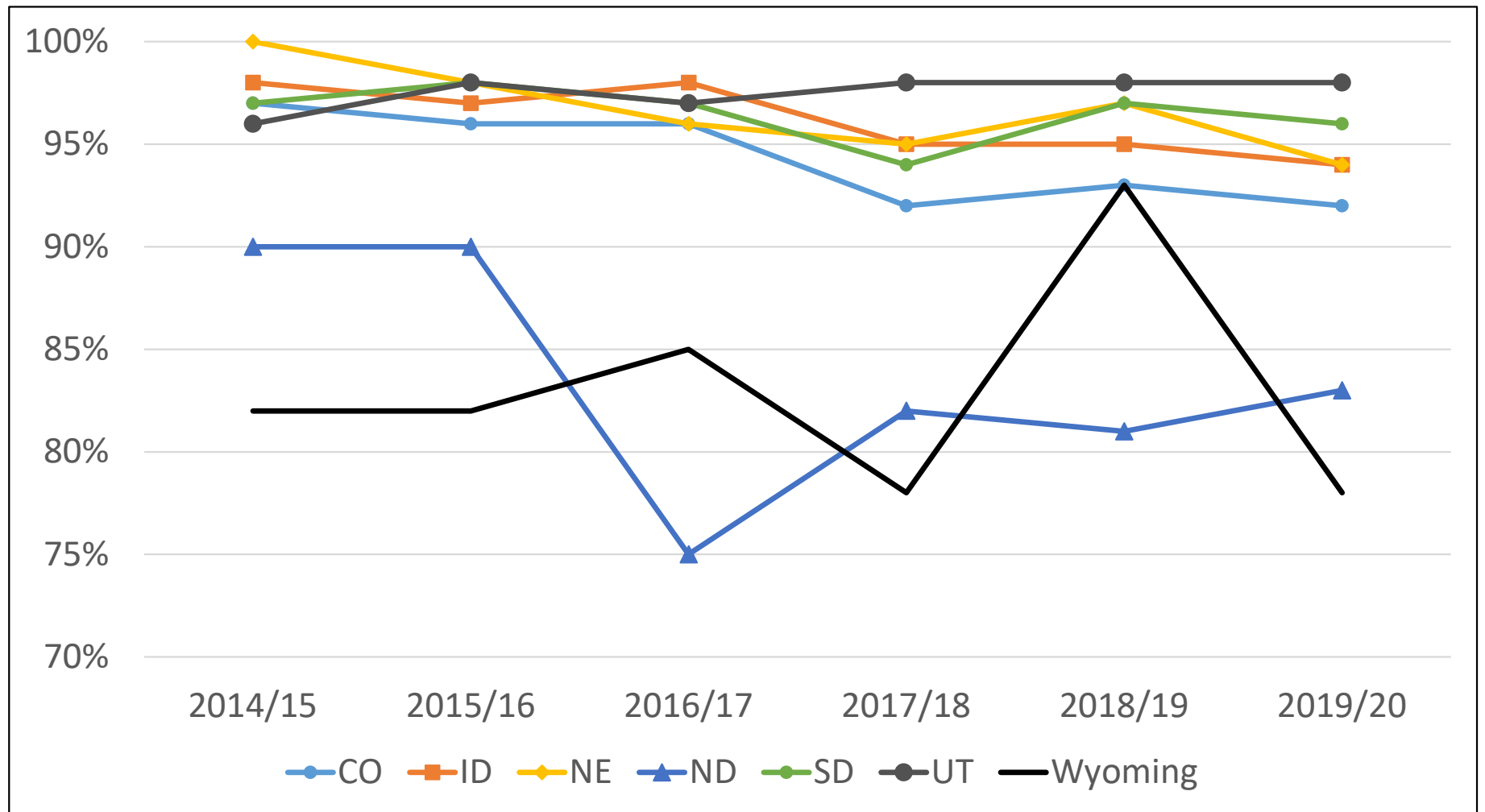
Exam takers relative to program completers



Source: US Department of Education.

<https://title2.ed.gov/Public/Home.aspx>. Accessed 9/16/2022

Do candidates get licensed? Exam pass rate

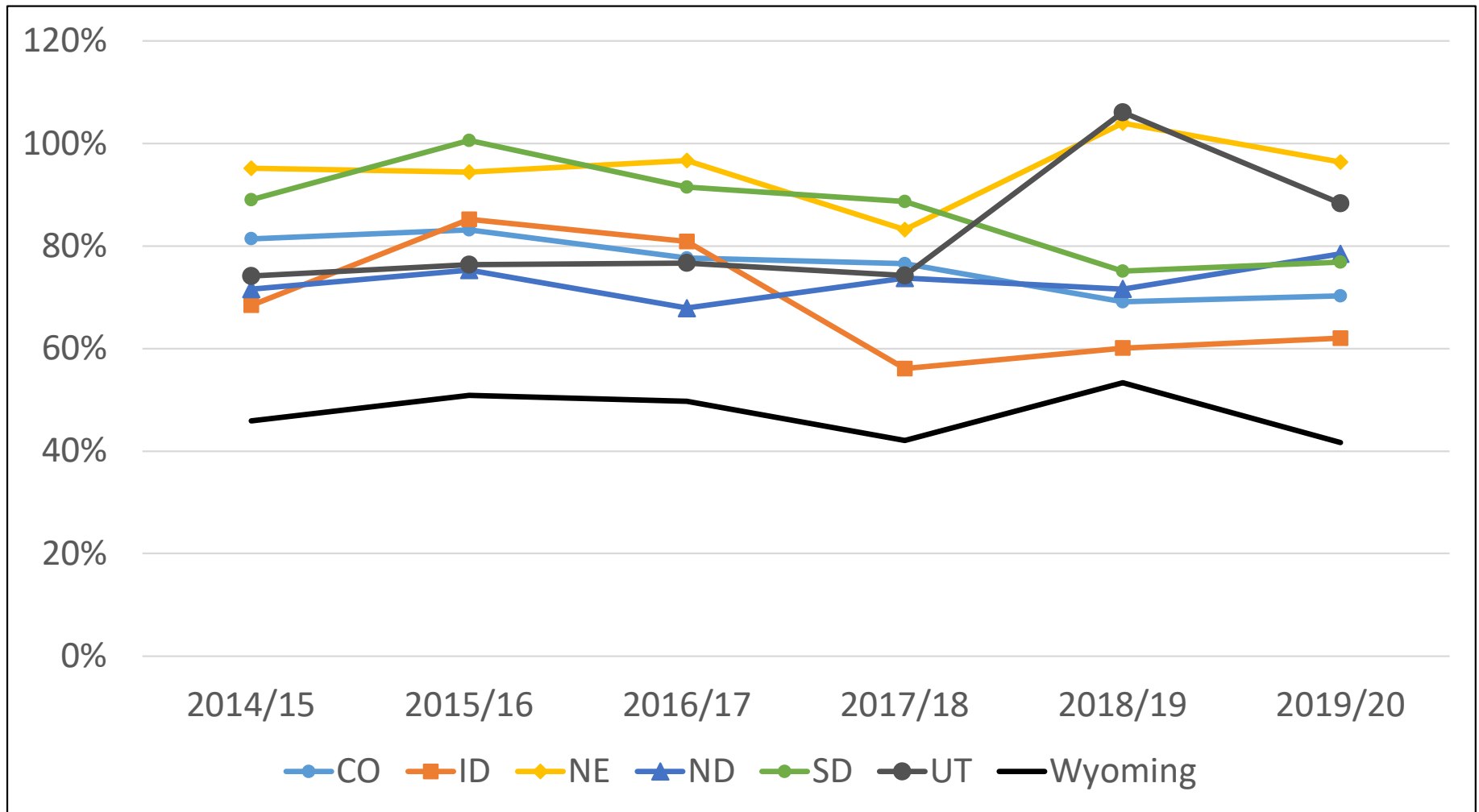


Source: US Department of Education.

<https://title2.ed.gov/Public/Home.aspx>. Accessed 9/16/2022

Do candidates get licensed?

Number passing/Number of completers



Source: US Department of Education.

<https://title2.ed.gov/Public/Home.aspx>. Accessed 9/16/2022

Summary of Indicators

Summary Labor Market Indicators

- Wyoming teaching salaries have shown little growth since 2012/13
- Teaching wages have fallen relative to salaries in other comparable occupations in WY, from a ratio of 96% to 87%.
- This ratio is still competitive with other states. The ratio in the US and surrounding states is 75%.

Summary Labor Market Indicators

- These ratios are for 2021. Average wages in WY in 2022 grew at 11%.
- College educated workers nationally saw rapid wage increases of 7 percent, consistent with overall wage growth.
- The 2022 ratios are likely to be even lower than in the report if college education workers in WY have a rate of increase similar to the overall average

Summary Labor Market Indicators

- Average actual teaching wages in WY 10% above the average in neighboring states and ND.
- The premium has fallen from a former high of 26% in 2010/11.
- UT and NE now have average wages very close to those in WY, while other states in the region are lower.
- WY salaries grew at less than 1 percent per year. Average salaries in other states increased 1-2 percent per year.
- Salaries in the model are now 3% below actual average salary in nearby states.
(Note that other states have different funding models and do not have state model salaries.)

Summary of Demographic Indicators

- Student enrollment is projected to show little growth.
- The fraction of teachers 60 and older has been falling from the 2012/13 high to 7 percent, the low point in many years.

Summary of Retention Indicators

- About 10.4% of teachers are new hires, similar to last 10 years.
- Exit rates are about 10%, similar to last several years.
- Exit rates of new teachers (up to 3 years experience) about 15%.
- Mid career teachers show no changes in exit rates.
- Older teachers had a higher exit rate last year, like older workers in all industries.

Summary of Recruitment Indicators

- The number and fraction of BA degrees in education at the University of Wyoming has been trending downward since 2010, but has been relatively stable over last 5 years, Number of majors is up slightly.
- One distinct feature of WY teacher preparation appears to be that candidates take and pass the certification exam at low rates.